UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,669	07/17/2000	Eric P. Traut	068167.0103	8184

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EXAMINER
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ART UNIT	PAPER NUMBER
2174	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *19 December 2003*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-20* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All   b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage

application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *15*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to Amendment B, filed 12/19/03.

2.   Claims 1-20 are pending in this application. Claims 1, 8, 11, and 12 are independent

claims, and claim 4 is amended. This action is made final.

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior office action.

Claim Rejections - 35 USC § 102

4.   Claims 1-2, 6, 8-15, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated

by Brown et al. (U.S. Patent No. 5,673,403).

As to claim 1, Brown teaches a computer system for running one or more software

applications, wherein the software applications are suitable for generating a video output,

comprising:

a host operating system suitable for displaying a graphical user interface (X Window

System, col. 2 lines 15-20);

multiple emulated operating systems being emulated by one or more emulator programs

running on the host operating system (col. 2 lines 1-31 and figs. 3-4); and

wherein the host operating system is able to display for a user a reduced-size (sizing

features, col. 2 lines 25-26, and col. 4 lines 47-54) representation of the video output of the

emulated operating systems (figs. 3-4) that are being operated in a background mode (col. 2 lines

1-31, col. 4 line 55-col. 5 line 39, and figs. 3-4).

As to claim 2, Brown teaches the computer system of claim 1, further comprising one or more virtual video memory components suitable for storing the video output of the emulated operating systems (the GUI allocates display screen space, col. 2 lines 20-21, and col. 4 lines 28-54).

As to claim 6, Brown teaches the computer system of claim 1,

wherein the graphical user interface is a windowing environment suitable for displaying one or more windows (col. 2 lines 1-31 and figs. 3-4); and

wherein the portion of the graphical user interface comprising the reduced-size representation is a window (sizing features, col. 2 lines 25-26, and col. 4 lines 47-54).

As to claim 8, Brown teaches a computer system for running one or more software applications, wherein the software applications are suitable for generating a video output, comprising:

a host operating system suitable for displaying a graphical user interface (X Window System, col. 2 lines 15-20);

multiple emulated virtual machines being emulated by one or more emulator programs running on the host operating system (col. 4 lines 1-54, and figs. 3-4); and

wherein the host operating system is able to display for a user a reduced-size representation of the video output of each virtual machine being operated in a background mode (col. 2 lines 1-31, col. 4 line 55-col. 5 line 39, and figs. 3-4).

As to claim 9, Brown teaches the computer system of claim 8, wherein the reduced-size representations are representations of the video outputs of the virtual machines that are being operated in the background mode (col. 2 lines 1-31, col. 4 line 55-col. 5 line 39, and figs. 3-4).

As to claim 10, Brown teaches the computer system of claim 9,

further comprising a virtual video memory associated with each of the virtual machines

(the GUI allocates display screen space, col. 2 lines 20-21, and col. 4 lines 28-54) ; and

wherein the reduced-size representations are generated from the video information stored

in the virtual video memory associated with each virtual machine (each client program

specifically for a particular operating system, col. 3 lines 42-55, and col. 5 lines 18-28).

As to claim 11, Brown teaches a method for displaying a reduced-size image of multiple

emulated computer systems, comprising the steps of:

suspending one or more of the multiple emulated computer systems by saving to memory

in the host computer system the image of the emulated computer system; reading in at the

emulator program from memory in the host computer system the image of the suspended

emulated computer system; interpreting in the emulator program the contents of the saved image

of the suspended emulated computer system (wait for some period of time before drawing to the

X window, col. 6 lines 21-34, and col. 5 lines 18-28);

displaying a reduced-size representation of the suspended emulated computer system

(figs. 3-4).

As to claim 12, Brown teaches a method for displaying a reduced-size image of multiple

emulated computer systems, comprising the steps of:

reading in at the emulator program from memory in the host computer system the image

of the emulated computer system; interpreting in the emulator program the contents of the image

of the emulated computer system (col. 5 lines 18-28);

displaying a reduced-size representation of the emulated computer system (figs. 3-4);

periodically updating the reduced-size representation of the emulated computer system

(clock program 109 is showing real time, col. 4 line 55-col. 5 line 28, and figs. 3-4).

As to claims 13-15, and 17-20, they are method claims of system claims 1, 1, 2, 8, 1, 9,

and 10. Note the rejections of claims 1, 1, 2, 8, 1, 9, and 10 above respectively.

Claim Rejections - 35 USC § 103

5.   Claims 3-5, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown

et al. (U.S. Patent No. 5,673,403) in view of Ote et al. (U.S. Patent No. 5,367,628).

As to claim 3, Brown teaches the computer system of claim 2, but Brown does not teach

wherein one or more of the video memory components are VRAM memory. Ote clearly teaches

VRAM memory (col. 4 lines 47-56, and figs. 2-3). It would have been obvious at the time of the

invention that a person with ordinary skill in the art would want to have this highly desirable

feature of Ote's VRAM into Brown's X Window System to provide fast-block-transfer access to

the internal memory.

As to claim 4, Brown teaches the computer system of claim 1, wherein the emulated

operating systems operating in a background mode are active (different operating systems are

running, col. 2 lines 10-20, and figs. 3-4), and one or more thumbnail images (icons, col. 5 lines

1-6, and figs. 3-4); but Brown does not clearly show wherein information stored on the video

memory components at predetermined intervals. Ote clearly teaches periodically transfer display

text and image data, col. 3 lines 50-55, and col. 4 lines 47-55). It would have been obvious at the

time of the invention that a person with ordinary skill in the art would want to add Ote's time

interval into Brown's X Window System to update displayed information.

As to claim 5, Brown teaches the computer system of claim 4, wherein the predetermined intervals are such that the thumbnail images are real-time representations of the video output from the active software applications (clock program 109 is showing real time, col. 4 line 55-col. 5 line 28, and figs. 3-4).

As to claim 16, this is a method claim of system claim 3. Note the rejection of claim 3 above.

6.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. Patent No. 5,673,403) in view of Brett (U.S. Patent No. 5,850,471).

As to claim 7, Brown does not teach the reduced-size representations are created using a bilinear sampling technique; however, Brett clearly describes the bilinear sampling technique in his High-definition Digital Video Processing System (col. 10 lines 58-74 and col. 11 lines 1-11). It would have been obvious, at the time of the invention, a person with ordinary skill in the art would want to have this data reduction feature of Brett's bilinear sampling technique into Brown's X Window System to improve performance and quality in graphic data loading process (col. 11 lines 1-10).

Response to Arguments

7.   Applicant's arguments filed 12/19/03 in Amendment B have been fully considered but they are not persuasive.

Applicants argued the following:

Brown does not teach an <u>emulated virtual machine</u> running on one host operating system.

The Examiner disagrees for the following reasons:

Brown clearly teaches that to be able to run and display an application written for a different operating system, the application calls are <u>mapped</u> into that operating system form which enable the application commands to be <u>recognized by the library</u> of function calls (col. 2 lines 3-43). It means the data of the second operating system will utilize a part of memory in the first operating system to run and display its data on the first operating system; therefore, the mapping technique and utilizing a part of memory are how the emulated virtual machine actually works.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Truc T Chuong whose telephone number is 703-305-5753. The examiner can normally be reached on M-Th and alternate Fridays 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on 703-308-0640. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Truc T. Chuong

03/11/04

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